

# **Data-Driven Decision Making: Informing Clinical, Community, and Population Approaches to Health**

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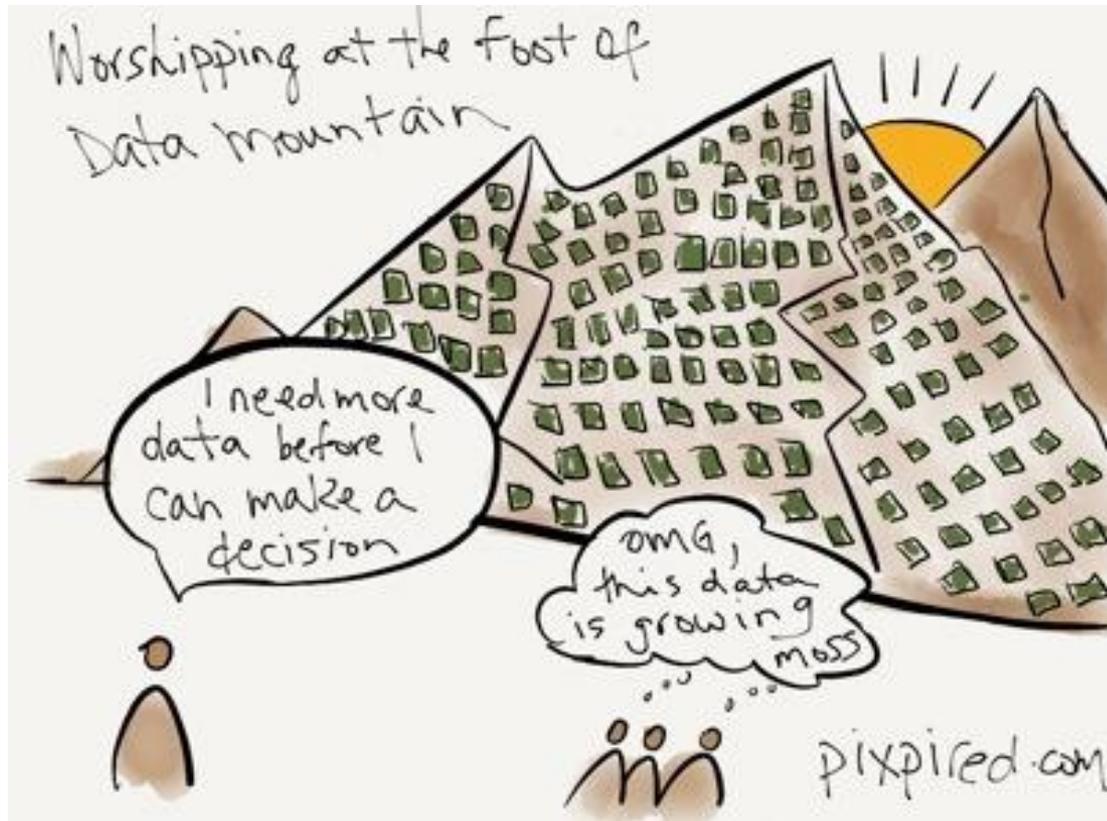
**Accountable Communities for Health: Learning Laboratory Meeting #2  
WSOC  
October 08, 2018**

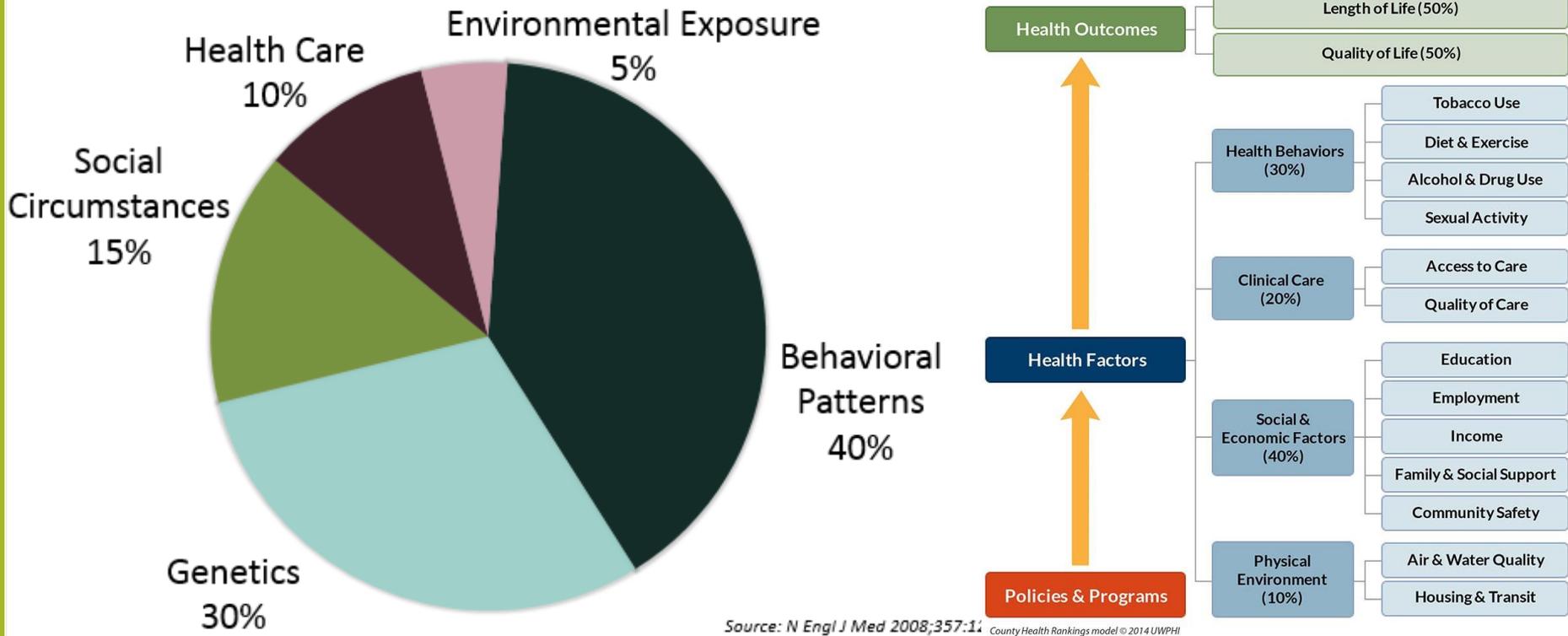
# 9 Core Elements of an Accountable Community for Health Model



1. Mission
2. Multi-Sectoral Partnership
3. Integrator Organization
4. Governance
5. **Data and Indicators**
6. Strategy and Implementation
7. Community Member Engagement
8. Communications
9. Sustainable Funding

# Data, Data, Everywhere...





# FOUNDATIONAL CONCEPTS: POPULATION HEALTH IMPACTS

# Broaden Scope to Include All 3 Streams

**RACISM**

**POVERTY**



**Upstream**  
- Structural Factors

**Mid-stream**  
- Social Determinants

**Downstream**  
- Health Care Outcomes



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# Importance of data driven decision making in Accountable Communities for Health

- ▶ We are all working towards understanding our communities better
  - ▶ The challenges and problems they face
  - ▶ Identifying and prioritizing problems, opportunities, and goals
  - ▶ Monitoring progress and change
- ▶ Communicating back to our community about what is being done and who is better off as a result.
- ▶ *Data can help us do all of the above*

## What data to use, where to start

- ▶ When thinking about ACH, we don't just compile all of our measures
- ▶ We want to use the right types of data/information at the right time for the right activities
- ▶ Used together, quantitative and qualitative data can enrich and **deepen what we know**

# What type of data?

- ▶ Quantitative
  - ▶ Health Care Encounters
    - ▶ Clinical
    - ▶ Claims
    - ▶ Hospital Discharge and Emergency Visits
  - ▶ Registries
    - ▶ Cancer
    - ▶ Immunization
    - ▶ Vermont Prescription Monitoring System (VPMS)
  - ▶ Population
    - ▶ Vital Statistics
    - ▶ Surveys (e.g., BRFSS, YRBS, PRAMS)
  - ▶ Community
    - ▶ Community resources (e.g., physical activity access in community)
    - ▶ Data collected as part of a local program or effort (e.g., community survey)
- ▶ Qualitative
  - ▶ Focus groups
  - ▶ Interviews

# Ways to use data

Depending on where an ACH is within its lifespan, members may be:

## ▶ Identifying trends

### ▶ 1305 Surveillance Data Pages

- ▶ Prevalence of gestational diabetes, all Vermont births (Vitals, [pg. 32](#))
- ▶ Prevalence of Cardiovascular Disease, Adults (BRFSS, [pg. 47](#))
- ▶ Hospital Discharges with CVD Diagnosis, Rate per 10,000 Vermonters (Hospital Discharge Data, [pg. 48](#))
- ▶ % of Insured Vermont Adults 18-64 with Hypertension who are at Least 80% Adherent with their Antihypertensive Medication Regimen (VHCURES, [pg. 68](#))

## ▶ Assessing needs

### ▶ State Health Assessment (SHA)

- ▶ Health equity lens

### ▶ Vermont CHNA Community Profile ([HSA](#) & [DO](#) Versions)

- ▶ Breast Cancer Incidence Rate per 100,000 women (NPCR)
- ▶ % of adults with cholesterol check in last 5 years (BRFSS)
- ▶ % of adolescents who do not eat 5 fruits & vegetables per day (YRBS)
- ▶ PCP FTEs per 100, Vermonters (Health Care Workforce Census)

# Ways to use data

Depending on where an ACH is within its lifespan, members may be:

## ▶ Establishing Measures

### ▶ State Health Improvement Plan (in-progress)

- ▶ Prioritize topics and populations based on SHA

### ▶ Healthy Vermonters 2020 (including Performance Scorecard)

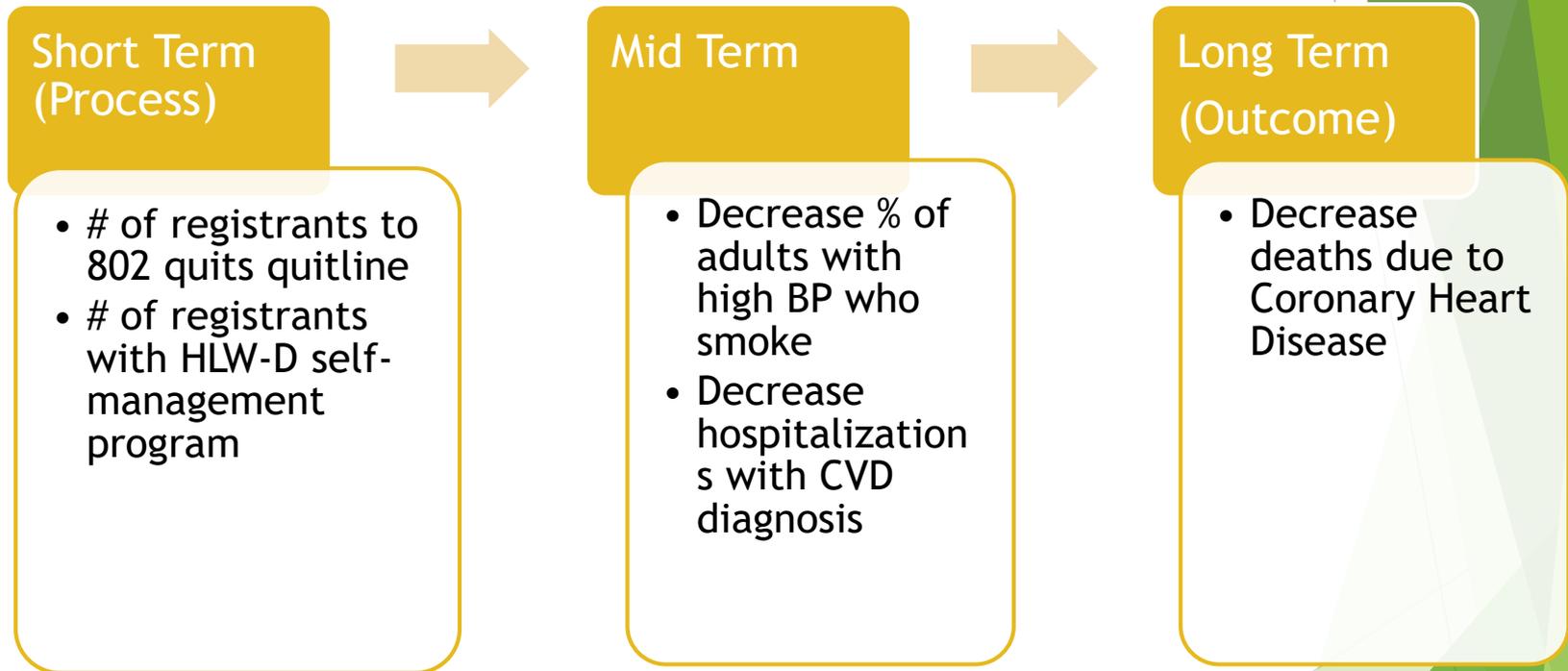
- ▶ Coronary Heart Disease Death Rate per 100,000 Vermonters (Vitals)
- ▶ % of Children with Developmental Screening by Age 3 (Blueprint)
- ▶ # of Vermonters with diabetes who complete a Healthier Living Workshop - Diabetes (program data)
- ▶ # of registrants to the 802 Quits Quitline (program data)

## ▶ Setting and Measuring Progress Towards Goals

### ▶ Heart Disease Prevention Goal Tracker

- ▶ Decrease % of Vermont adults with high blood pressure who smoke (BRFSS)
- ▶ Increase % of insured Vermonters 18-64 with diagnosed high blood pressure who have at least one primary care visit for high blood pressure in last year (VHCURES)
- ▶ Decrease % of adults with high blood pressure who have no leisure time physical activity (BRFSS)

## Example of Using Data



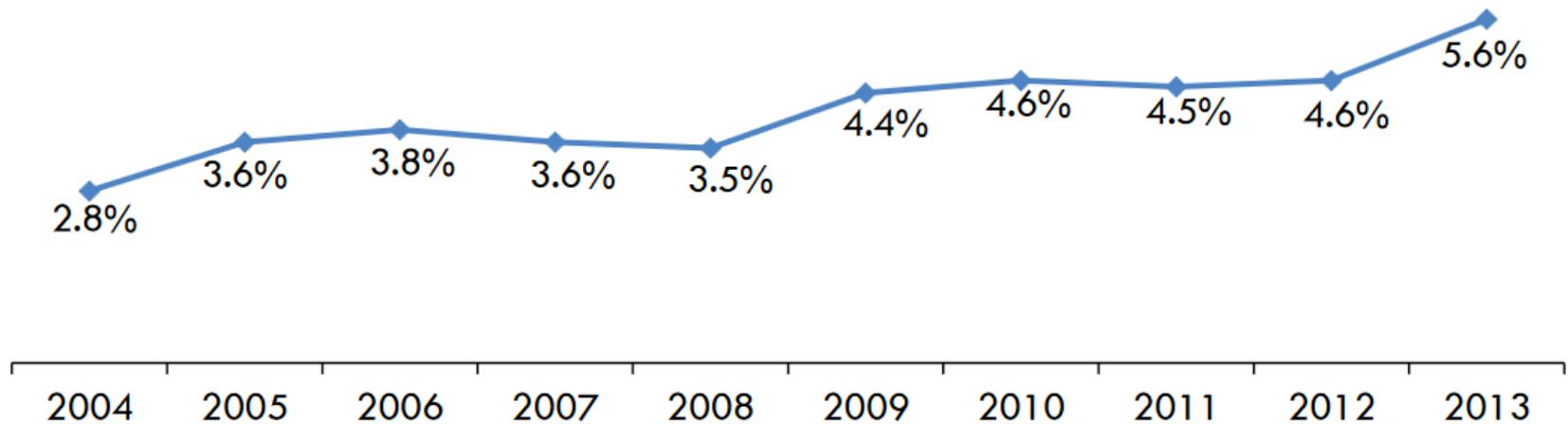
## When working with data remember....

- ▶ Different types of data for different things
  - ▶ Process vs. Outcome
  - ▶ Short vs. Mid. vs. Long-Term
  - ▶ Multiple sources and perspectives
    - ▶ Health care encounters vs. Population
  - ▶ Qualitative vs. Quantitative

# Prevalence of Gestational Diabetes among All Vermont Births

Since 2004, the rate of gestational diabetes among Vermont births has significantly increased (2.8% to 5.6%). The increase from 2012 to 2013 was not statistically significant. The steep increases in gestational diabetes seen in 2005 and again in 2009 are likely related to better capture of gestational diabetes due to enhanced electronic reporting.

**Prevalence of Gestational Diabetes among All Vermont Births**



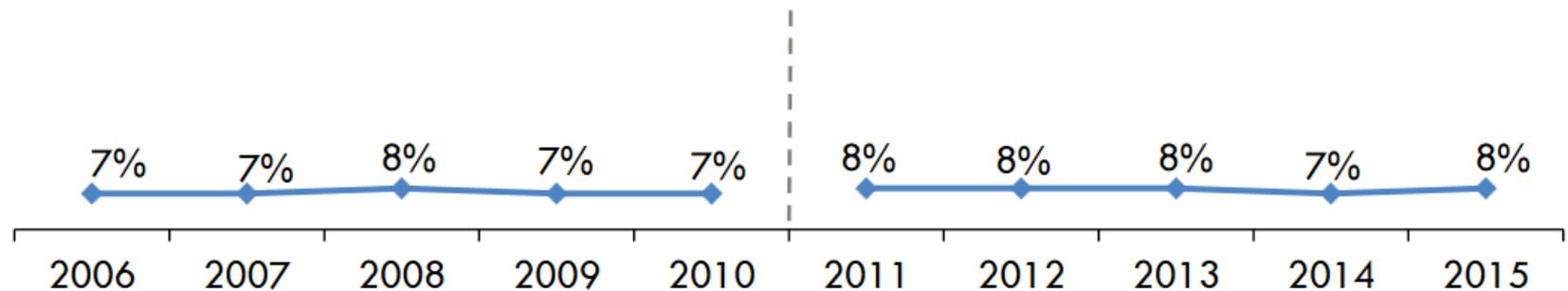
Source: Vermont Birth Certificate Data 2004-2013.

# Adult Prevalence of Cardiovascular Disease†



The prevalence of CVD in Vermont has remained stable and statistically unchanged since 2005. This includes 4% who had been diagnosed with coronary heart disease (CHD), 5% who had a heart attack, and 3% who had a stroke in 2015. The rates of CHD, heart attack, and stroke are also similar to previous years.

## Prevalence of Adults with Cardiovascular Disease\*

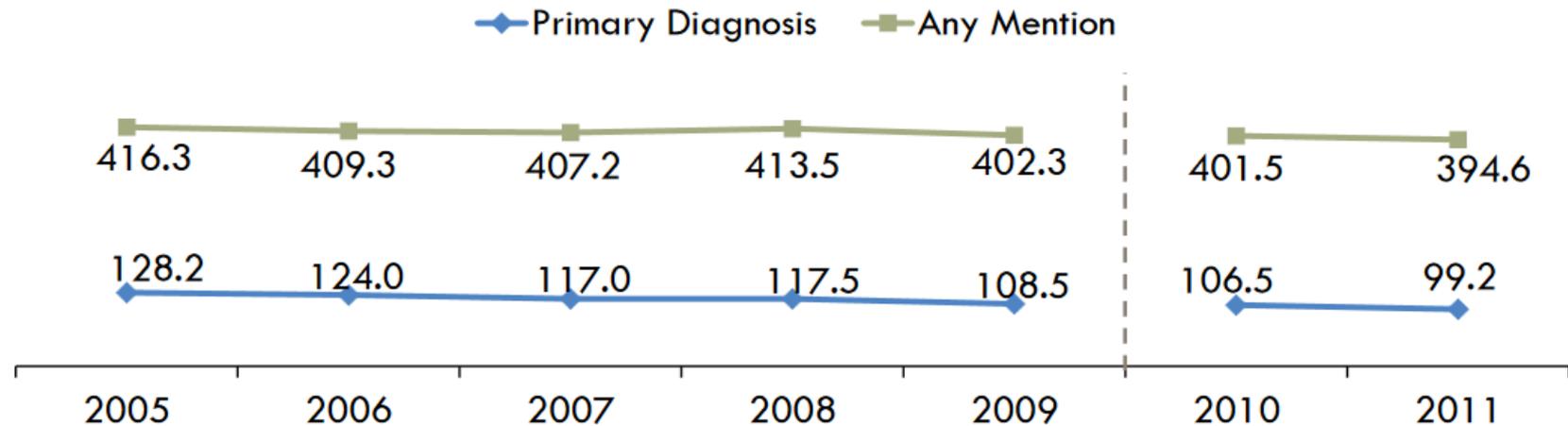


Source: Vermont Behavioral Risk Factor Surveillance System 2006-2015.

# Cardiovascular Disease-Related Hospital Discharges<sup>†</sup>

In 2011, there were 99.2 hospital discharges with a primary diagnosis of CVD for every 10,000 Vermonters (7,422 discharges). This is significantly lower than in 2010. Any mention of CVD as a factor for hospitalization occurred in 394.6 hospital discharges for every 10,000 Vermonters (29,366 discharges) indicating a substantial number of discharges with CVD as a contributing factor.

**Hospital Discharge with a CVD Diagnosis (rate per 10,000 Vermonters)<sup>^</sup>**

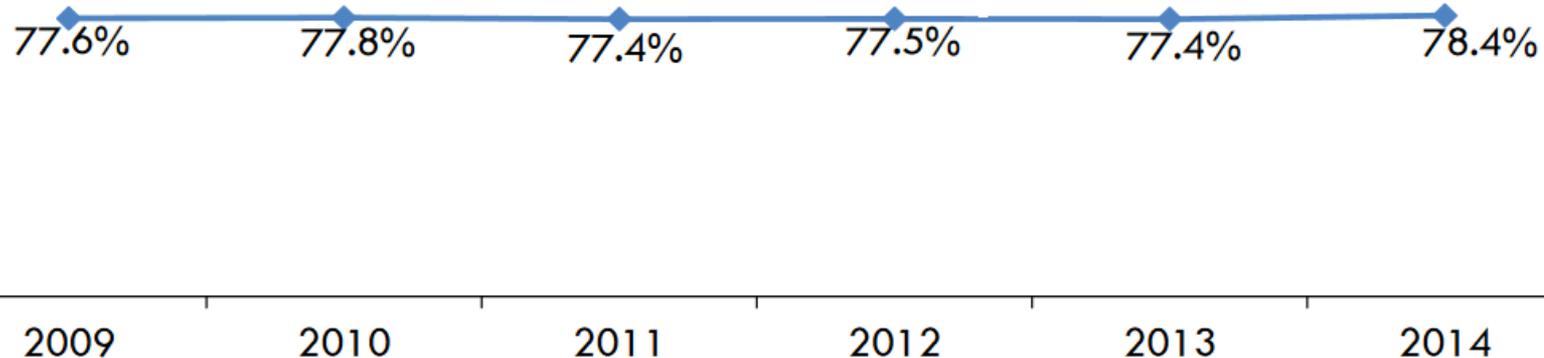


Source: Vermont Uniform Hospital Discharge Data Set (VUHDDS) 2005-2011.<sup>¶</sup>

# Antihypertensive Medication Adherence

Medication adherence is measured using “proportion of days covered” (PDC). PDC refers to proportion of days an insured person has filled a supply of medication in relation to the number of days they should be covered for, following their first prescription date during a year. In 2014, close to one in eight (78.4%) Vermont adults 18-64 who were continuously enrolled in a prescription drug benefit plan during the year were at least 80% adherent to their blood pressure medication regimen. Adherence rates were statistically similar between commercial and Medicaid claims from 2009 to 2014.

**Proportion of Insured Vermont Adults 18-64 With Hypertension Who Are At Least 80% Adherent with their Antihypertensive Medication Regimens**



Source: Vermont Healthcare Uniform Reporting and Evaluation System (VHCURES) 2009-2014.

**Step 1 - Select your Topic**

Healthy Vermonters 2020

Nutrition & Weight Status

Percent of Adolescents in Grades 9-12 Eating F

**Step 2 - Location Type & Time Period**

Location Type

Counties

Time Period

2015

**Step 3 - Search...**

SEARCH Clear All

## How Healthy Are We? Public Health Data Explorer

Related Content:

**VT Agency of Human Services Population Indicators**

**VT Topic Specific Data**

**National Healthy People 2020**

**National Environmental Public Health Tracking**

**Nutrition & Weight Status**  
Percent of adults age 20 and older who are obese; BRFSS, 2014-2015

\*This is a Healthy Vermonters 2020 objective

Counties (2014-2015)	Indicator Value	Statistically Compared to State
ADDISON	27	Same
BENNINGTON	29	Same
CALEDONIA	32	Worse
CHITTENDEN	19	Better
ESSEX	22	Same
FRANKLIN	30	Same
GRAND ISLE	24	Same
LAMOILLE	28	Same
ORANGE	29	Same
ORLEANS	30	Same
RUTLAND	30	Worse
WASHINGTON	25	Same
WINDHAM	27	Same
WINDSOR	27	Same

**State Summary:**

State	Indicator Value	State Data Year(s)
VERMONT	25	Year: 2015

**TREND - To view trend, scroll over tables, map, or legend**

**ANIMATION: Data Year Selection**

2000-2002 2001-2003 2002-2004 2003-2005 2004-2006 2005-2007 2006-2008 2007-2009 2008-2010 2011-2012 2012-2013 2013-2014 2014-2015

Vermont continues to be one of the **healthiest states in the nation** but there are challenges ahead. To meet these, we track, measure, report on, and apply data in order to achieve our shared goals for improving public health. Our data explorer allows you to access this information, view trends over time, and visualize the indicators on Vermont maps. The data explorer highlights data that is part of Healthy Vermonters 2020 and Environmental Public Health Tracking by bringing together environmental and health data in one place. This data should be used to assess and understand health and well-being in Vermont. It can be used to guide decision making, apply for funding, engage community partners, and demonstrate achievements.

The public health data explorer starts with selecting from two different starting points:

### Healthy Vermonters 2020

**Healthy Vermonters 2020** is the State Health Assessment Plan that captures our priority outcomes and indicators for the decade.

- The data explorer visualizes 122 population indicators with trend lines showing progress to our 2020 goals, and maps comparing the data at the county, health district, and hospital service area levels. Explore the interactive maps and trends that help us quantify the

**Vermont Heart Disease Prevention Goal Tracker**  
**May, 2017**

**Heart Disease Prevention Goals**

A comprehensive statewide surveillance system will monitor Vermonters at risk of developing heart disease, also known as cardiovascular disease (CVD) to:

1. Identify trends in risk factors that may lead to heart disease
2. Ensure that Vermonters with CVD adhere to recommended standards of care
3. Ensure that Vermonters with high blood pressure or CVD engage in appropriate self-management with support from their families and caregivers
4. Facilitate data driven decisions to support policy and program planning and direct resource allocation

**1. Risk Factors that Lead to Heart Disease**

	Baseline (2015)	Current (2015)	Goal (2020)
Decrease the percentage of Vermont adults who are diagnosed with high blood pressure <sup>1HV</sup>	27% (2011)	25%	20%
Increase the percentage of adult Vermonters with high blood pressure who consume healthy foods:			
Two or more fruits a day <sup>1a</sup>	28%	28%	32%
Three or more vegetables a day <sup>1a</sup>	13%	13%	16%
Increase the percentage of adult Vermonters who engage in aerobic physical activity:			
Increase the percentage of adults with high blood pressure who meet aerobic physical activity guidelines <sup>1a</sup>	51%	51%	55%
Decrease the percentage of adults with high blood pressure who have no leisure time physical activity <sup>1a</sup>	28%	28%	25%
Decrease the percentage of Vermont adults with high blood pressure who smoke <sup>1a</sup>	23%	23%	20%

**Notes:** <sup>a</sup> Data are age-adjusted to the US 2000 standard population  
<sup>HV</sup> Healthy Vermonters 2020 Measures  
n/a = data not yet available  
<sup>§</sup> Definition of Health Systems changed in 2016 and may partly be responsible for differences seen between 2015 and 2016.

**2. High Blood Pressure Management**

	Baseline (2015)	Current (2015)	Goal (2020)
Increase the percentage of Vermonters (18-64) with high blood pressure who are at least 80% adherent with their medication regimens <sup>3</sup>	78% (2012)	78% (2014)	81%
Increase the percentage of Vermont adults who have had their cholesterol checked in the last 5 years <sup>1aHV</sup>	75% (2011)	76%	85%
Increase the percentage of insured Vermonters (18-64) with diagnosed high blood pressure who had at least 1 primary care visit for high blood pressure in the last year <sup>3</sup>	34% (2014)	34% (2014)	38%
Increase the percentage of Vermont adults with high blood pressure who have achieved blood pressure control	n/a	n/a	-
Increase the proportion of Vermont health systems reporting on controlling blood pressure among adults 18-85 who had a diagnosis of high blood pressure (NQF 18) <sup>5§</sup>	27% (2012)	55%	82%

**3. Health Outcomes**

	Baseline (2015)	Current (2015)	Goal (2020)
Decrease the percentage of Vermont adults who have been diagnosed with CVD <sup>1</sup>	7%	7%	6%
Increase the percentage of Vermont adults with CVD who say their general health is "good" or better <sup>1</sup>	62%	62%	66%
Decrease the hospitalization rate for any mention of cardiovascular disease (rate per 10,000 Vermonters) <sup>2a</sup>	296.0 (2014)	296.0 (2014)	290.0
Decrease the rate of any mention of cardiovascular disease as a cause for an ED visit (rate per 10,000 Vermonters) <sup>2a</sup>	442.1 (2014)	442.1 (2014)	435.0
Decrease the death rate due to Coronary Heart Disease (CHD) as a primary cause of death (rate per 100,000 Vermonters) <sup>4aHV</sup>	111.7 (2009)	105.4 (2014)	89.4
Decrease the death rate due to stroke as a primary cause of death (rate per 100,000 Vermonters) <sup>4aHV</sup>	29.3 (2009)	27.7 (2014)	23.4